

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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STRUCTURE FILE UPDATES: 21 AUG 2002 HIGHEST RN 444646-89-3
DICTIONARY FILE UPDATES: 21 AUG 2002 HIGHEST RN 444646-89-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e cetyltrimethylammonium bromide/cn

E1	1	CETYLTRIMETHYLAMMONIUM BENZOATE/CN
E2	1	CETYLTRIMETHYLAMMONIUM BENZOSULFIMIDE/CN
E3	1 -->	CETYLTRIMETHYLAMMONIUM BROMIDE/CN
E4	1	CETYLTRIMETHYLAMMONIUM BROMIDE-.BETA.-CYCLODEXTRIN COMPOUND (1:1)/CN
E5	1	CETYLTRIMETHYLAMMONIUM BROMIDE-CONGO RED COMPLEX (2:1)/CN
E6	1	CETYLTRIMETHYLAMMONIUM BROMIDE-EDTA MIXT./CN
E7	1	CETYLTRIMETHYLAMMONIUM BROMIDE-POLY(METHACRYLIC ACID) COMPD. /CN
E8	1	CETYLTRIMETHYLAMMONIUM BUTYLPHOSPHONATE/CN
E9	1	CETYLTRIMETHYLAMMONIUM CATION/CN
E10	1	CETYLTRIMETHYLAMMONIUM CHLORATE/CN
E11	1	CETYLTRIMETHYLAMMONIUM CHLORIDE/CN
E12	1	CETYLTRIMETHYLAMMONIUM CHLORIDE COMPD. WITH P-PHENYLPHENOL (1:1)/CN

=> d

ENTER NAME OF ITEM TO BE DISPLAYED OR (?):d e3
'D' IS NOT VALID HERE

For an explanation, enter "HELP DISPLAY".

=> help display

The DISPLAY command is used to view various types of saved and
current-session information. To use this command, enter DISPLAY and
the name of the item to be displayed. The system will display the
item online. Highlighting characters may be suppressed by adding the
NOHIGHLIGHT (NOH) option on the command line.

For information on the predefined formats available for the display
of records in this file, enter HELP FORMAT at an arrow prompt (=>).
For information on the display of records using individual fields or
groups of fields, enter HELP DFIELDS. For information on how to
create a user-defined display format, enter HELP SET FORMAT. For
information on how to change the default display format for this
file, enter HELP SET DFORMAT. To see the current default display
format for this file, enter DISPLAY SET DFORMAT.

For more information about the DISPLAY command, enter one of the
following HELP commands at an arrow prompt.

=> HELP DISPLAY ACC ----- To see the record for a specific
Accession Number in a file

=> HELP DISPLAY ARCHIVE --- To grant permission to store STN records
for the purposes of electronic access
by a specified number of users within
your worldwide organization

=> HELP DISPLAY BROWSE ---- To browse through an answer set without
rekeying the DISPLAY command before each
answer number

=> HELP DISPLAY CLUSTER --- To see user-defined and system-defined
file clusters

=> HELP DISPLAY COST ----- To see the approximate cost of a session

=> HELP DISPLAY CURRENCY -- To see the patent currency status of
certain files

=> HELP DISPLAY EXPAND ---- To see the E-number list from an EXPAND
or SELECT command

=> HELP DISPLAY FIELD ----- To see the user-defined search fields

=> HELP DISPLAY FORMAT ---- To see the user-defined display formats

=> HELP DISPLAY FROM ----- To see records from specific files when
the L-number contains records from
multiple files

=> HELP DISPLAY HISTORY --- To see the commands used in this session

=> HELP DISPLAY L# ----- To see answers from a search

=> HELP DISPLAY PFAM ----- To see selective records from specified
patent families in an FSORT L-number

=> HELP DISPLAY PRINT ----- To see the status of offline prints
requested in this session

=> HELP DISPLAY QUERY ----- To see the definition of a query

=> HELP DISPLAY REDISTRIBUTE -- To grant permission to redistribute
within your worldwide organization a
specified number of printed or electronic
copies of STN records

=> HELP DISPLAY SAVED ----- To list saved items for this loginid

=> HELP DISPLAY SCAN ----- To scan through an answer set in random
order with a predefined display format

=> HELP DISPLAY SELECT ---- To see the E-number list from a SELECT or
EXPAND command

=> HELP DISPLAY SET ----- To see the SET parameters currently
active, changed, or set permanently

=> HELP DISPLAY TERM ----- To see the terms extracted using
SmartSELECT

=> HELP DISPLAY TOLERANCE - To see the tolerance in effect for
numeric fields available in the current
file

=> HELP DISPLAY TSORT ----- To sort the entries in a display that
uses a table format

=> HELP DISPLAY UNIT ----- To see the units in effect for numeric
fields available in the current file

=> s e3
L1 1 "CETYLTRIMETHYLAMMONIUM BROMIDE"/CN

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002

E CETYLTRIMETHYLAMMONIUM BROMIDE/CN
L1 1 S E3

=> d kwic

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

OTHER NAMES:

CN Cetyltrimethylammonium bromide

=> d hitstr

'HITSTR' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual
fields or predefined formats. The predefined substance formats
are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of numeric properties

PROP - Same as CALC

ABS -- Abstract

APPS -- Application and Priority Information

BIB -- CA Accession Number, plus Bibliographic Data

CAN -- CA Accession Number

CBIB -- CA Accession Number, plus Bibliographic Data (compressed)

IND -- Index Data

IPC -- International Patent Classification

PATS -- PI, SO

STD -- BIB, IPC, and NCL

IABS --ABS, indented, with text labels

IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ENTER DISPLAY FORMAT (IDE):end

=> dh is

```
          267 DH
          169114 IS
L2          0 DH IS
           (DH(W)IS)
```

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002

```
          E CETYLTRIMETHYLAMMONIUM BROMIDE/CN
L1          1 S E3
L2          0 DH IS
```

=> file ca

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	17.38	17.59

FILE 'CA' ENTERED AT 09:16:30 ON 23 AUG 2002

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 15 Aug 2002 VOL 137 ISS 8
FILE LAST UPDATED: 15 Aug 2002 (20020815/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002
E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L1 1 S E3
L2 0 DH IS

FILE 'CA' ENTERED AT 09:16:30 ON 23 AUG 2002

=> s l1

L3 11385 L1

=> d kwic

L3 ANSWER 1 OF 11385 CA COPYRIGHT 2002 ACS
IT 57-09-0, Hexadecyl trimethyl ammonium bromide
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; resistive semiconductive gas sensor contg. metal porphyrin
complexes for the detn. of ammonia)

=> d hitstr

L3 ANSWER 1 OF 11385 CA COPYRIGHT 2002 ACS
IT 57-09-0, Hexadecyl trimethyl ammonium bromide
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; resistive semiconductive gas sensor contg. metal porphyrin
complexes for the detn. of ammonia)
RN 57-09-0 CA
CN 1-Hexadecanaminium, N,N,N-trimethyl-, bromide (9CI) (CA INDEX NAME)

$\text{Me}_3^+\text{N}-(\text{CH}_2)_{15}-\text{Me}$

● Br^-

=> file registry

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

3.79

21.38

FILE 'REGISTRY' ENTERED AT 09:19:05 ON 23 AUG 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e cetyltrimethylammonium bromide/cn

E1	1	CETYLTRIMETHYLAMMONIUM BENZOATE/CN
E2	1	CETYLTRIMETHYLAMMONIUM BENZOSULFIMIDE/CN
E3	1 -->	CETYLTRIMETHYLAMMONIUM BROMIDE/CN
E4	1	CETYLTRIMETHYLAMMONIUM BROMIDE-.BETA.-CYCLODEXTRIN COMPOUND (1:1)/CN
E5	1	CETYLTRIMETHYLAMMONIUM BROMIDE-CONGO RED COMPLEX (2:1)/CN
E6	1	CETYLTRIMETHYLAMMONIUM BROMIDE-EDTA MIXT./CN
E7	1	CETYLTRIMETHYLAMMONIUM BROMIDE-POLY(METHACRYLIC ACID) COMPD. /CN
E8	1	CETYLTRIMETHYLAMMONIUM BUTYLPHOSPHONATE/CN
E9	1	CETYLTRIMETHYLAMMONIUM CATION/CN
E10	1	CETYLTRIMETHYLAMMONIUM CHLORATE/CN
E11	1	CETYLTRIMETHYLAMMONIUM CHLORIDE/CN
E12	1	CETYLTRIMETHYLAMMONIUM CHLORIDE COMPD. WITH P-PHENYLPHENOL (1:1)/CN

=> s e3

L4 1 "CETYLTRIMETHYLAMMONIUM BROMIDE"/CN

=> d l4

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 57-09-0 REGISTRY

CN 1-Hexadecanaminium, N,N,N-trimethyl-, bromide (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ammonium, hexadecyltrimethyl-, bromide (8CI)

CN Hexadecyltrimethylammonium bromide (6CI)

OTHER NAMES:

CN 1-Hexadecyltrimethylammonium bromide

CN Accelerator DT 3126-1

CN Acetoquat CTAB

CN Arquad 16/60

CN BCTA

CN Bromat

CN Cetrimonium bromide

CN **Cetyltrimethylammonium bromide**

CN Cirrasol OD

CN CTAB

CN CTABr

CN CTMAB

CN CTMB

CN HDTMA-Br

CN Hexadecyltrimethylamine bromide

CN Hexdecyltrimethylammonium bromide

CN HTAB
 CN Lauroseptol
 CN Lissolamine
 CN Lissolamine A
 CN Micol
 CN N,N,N-Trimethyl-1-hexadecanaminium bromide
 CN N,N,N-Trimethylhexadecan-1-ammonium bromide
 CN N,N,N-Trimethylhexadecylammonium bromide
 CN N-Cetyl-N,N,N-trimethylammonium bromide
 CN N-Cetyltrimethylammonium bromide
 CN N-Hexadecyl-N,N,N-trimethylammonium bromide
 CN n-Hexadecyltrimethylammonium bromide
 CN Palmityltrimethylammonium bromide
 CN Pollacid
 CN Quamonium
 CN Rhodaquat M 242B99
 CN Softex KW
 CN Trimethylcetylammmonium bromide
 CN Trimethylhexadecylammmonium bromide
 CN Varisoft CTB 40
 DR 12294-25-6, 104302-76-3, 108779-80-2, 69217-35-2, 79631-76-8
 MF C19 H42 N . Br
 CI CCM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
 BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS,
 CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU,
 EMBASE, GMEIN*, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, MSDS-OHS, NIOSHTIC,
 PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2,
 USPATFULL, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)
 CRN (6899-10-1)

Me₃⁺N⁻ (CH₂)₁₅-Me

● Br⁻

11368 REFERENCES IN FILE CA (1967 TO DATE)
 164 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 11402 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 251 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e CETYLTRIMETHYLAMMONIUM chloride/cn

E1	1	CETYLTRIMETHYLAMMONIUM CATION/CN
E2	1	CETYLTRIMETHYLAMMONIUM CHLORATE/CN
E3	1 -->	CETYLTRIMETHYLAMMONIUM CHLORIDE/CN
E4	1	CETYLTRIMETHYLAMMONIUM CHLORIDE COMPD. WITH P-PHENYLPHENOL (1:1)/CN
E5	1	CETYLTRIMETHYLAMMONIUM CHLORIDE HEMIHYDRATE/CN
E6	1	CETYLTRIMETHYLAMMONIUM CHLOROCHROMATE/CN
E7	1	CETYLTRIMETHYLAMMONIUM CYANIDE/CN
E8	1	CETYLTRIMETHYLAMMONIUM CYCLOHEXANECARBOXYLATE/CN
E9	1	CETYLTRIMETHYLAMMONIUM DECAVANADATE/CN
E10	1	CETYLTRIMETHYLAMMONIUM DIBUTYL PHOSPHATE/CN
E11	1	CETYLTRIMETHYLAMMONIUM DIIODOBROMIDE/CN

E12 1 CETYLTRIMETHYLAMMONIUM DODECANESULFONATE/CN

=> s e3

L5 1 "CETYLTRIMETHYLAMMONIUM CHLORIDE"/CN

=> d 15

L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 112-02-7 REGISTRY

CN 1-Hexadecanaminium, N,N,N-trimethyl-, chloride (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ammonium, hexadecyltrimethyl-, chloride (8CI)

CN Hexadecyltrimethylammonium chloride (6CI)

OTHER NAMES:

CN Adogen 444

CN Aliquat 6

CN Ammonyx Cetac 30

CN Arquad 16

CN Arquad 16-25LO

CN Arquad 16-25W

CN Arquad 16-26

CN Arquad 16-29

CN Arquad 16-29W

CN Arquad 16-50

CN Barquat CT 29

CN BP 40

CN Carsoquat CT 429

CN Catinal CTC 70ET

CN Cation PB 40

CN CETAC

CN Cetac 30

CN Cetrimonium chloride

CN **Cetyltrimethylammonium chloride**

CN CTAC

CN CTMA

CN Dehyquart A

CN Dehyquart A-CA

CN Dodigen 1383

CN FSM 28

CN Genamin CTAC

CN HDTMA-Cl

CN HTAC

CN Incroquat CTC 30

CN Intexan CTC 29

CN Intexsan CTC 29

CN Intexsan CTC 50

CN Lebon TM 16

CN Lebon TM 60

CN Morpan CHA

CN N,N,N-Trimethyl-1-hexadecanaminium chloride

CN n-Hexadecyltrimethylammonium chloride

CN Nissan Cation PB 40

CN Palmityltrimethylammonium chloride

CN PB 40

CN Pionin B 611

CN Quartamin 60W

CN Quatramine C 16/29

CN Surfroyal CTAC

CN Swanol CA 2350

CN Trimethylcetylammmonium chloride

CN Trimethylhexadecylammmonium chloride

CN Variquat E 228

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

DR 139272-33-6, 146909-27-5, 79728-63-5, 53023-95-3, 217468-43-4

MF C19 H42 N . Cl

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX,
CHEMLIST, CIN, CSCHM, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HSDB*,
IFICDB, IFIPAT, IFIUDB, IPA, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*,
TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CRN (6899-10-1)

Me₃⁺N- (CH₂)₁₅-Me

⊙ Cl⁻

3154 REFERENCES IN FILE CA (1967 TO DATE)

64 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

3161 REFERENCES IN FILE CAPLUS (1967 TO DATE)

36 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e ammonium bicitrate/cn

E1	1	AMMONIUM BICARBONATE-DTPA MIXT./CN
E2	1	AMMONIUM BICHROMATE/CN
E3	0 -->	AMMONIUM BICITRATE/CN
E4	1	AMMONIUM BIFLUORIDE/CN
E5	1	AMMONIUM BIFLUORIDE (NH ₄ HF ₂)/CN
E6	1	AMMONIUM BIFLUORIDE (NH ₅ F ₂)/CN
E7	1	AMMONIUM BIMALATE/CN
E8	1	AMMONIUM BIOXALATE/CN
E9	1	AMMONIUM BIOXALATE MONOHYDRATE/CN
E10	1	AMMONIUM BIPHENYL-4-SULFONATE/CN
E11	1	AMMONIUM BIPHOSPHATE/CN
E12	1	AMMONIUM BIPHOSPHITE/CN

=> e ammonium dicitrate/cn

E1	1	AMMONIUM DICHROMATE ((ND ₄) ₂ CR ₂ O ₇)/CN
E2	1	AMMONIUM DICHROMATE(VI)/CN
E3	0 -->	AMMONIUM DICITRATE/CN
E4	1	AMMONIUM DICOBALTO DECAMOLYBDATE/CN
E5	1	AMMONIUM DICOBALTOUNDECATUNGSTATE/CN
E6	1	AMMONIUM DICYANAMIDE/CN
E7	1	AMMONIUM DICYANOCARBONYLCYCLOPENTADIENYLFERRATE(II)/CN
E8	1	AMMONIUM DICYANTHIOCYANATOMERCURATE(II)/CN
E9	1	AMMONIUM DICYCLOHEXYLDITHIOPHOSPHINATE/CN
E10	1	AMMONIUM DIDEUTERIUM PHOSPHATE/CN
E11	1	AMMONIUM DIDODECYLDIPHENYL ETHER DISULFONATE/CN
E12	1	AMMONIUM DIETHANOLDITHIOCARBAMATE/CN

=> e ammonium citrate/cn

E1	1	AMMONIUM CIS-TETRABROMOBIS(PYRIDINE)MOLYBDATE(1-)/CN
E2	1	AMMONIUM CITRACONAMATE/CN
E3	3 -->	AMMONIUM CITRATE/CN

E4 1 AMMONIUM CITRATE ((NH4)2O7C6H6)/CN
 E5 1 AMMONIUM CITRATE ((NH4)3O7C6H5)/CN
 E6 1 AMMONIUM CITRATE ((NH4)O7C6H7)/CN
 E7 1 AMMONIUM CLAVULANATE/CN
 E8 1 AMMONIUM COBALT ACETATE/CN
 E9 1 AMMONIUM COBALT CARBONATE HYDROXIDE ((NH4)2CO8(CO3)6(OH)6) T
 ETRAHYDRATE/CN
 E10 1 AMMONIUM COBALT CARBONATE HYDROXIDE ((NH4)CO4(CO3)3(OH)3)/CN
 E11 1 AMMONIUM COBALT CARBONATE HYDROXIDE ((NH4)CO4(CO3)3(OH)3), D
 IHYDRATE/CN
 E12 1 AMMONIUM COBALT CHLORIDE (NH4COCL3), DIHYDRATE/CN

=> s e3

L6 3 "AMMONIUM CITRATE"/CN

=> d l6

L6 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 7632-50-0 REGISTRY

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, ammonium salt (9CI) (CA
 INDEX NAME)

OTHER CA INDEX NAMES:

CN Citric acid, ammonium salt (8CI)

OTHER NAMES:

CN **Ammonium citrate**

MF C6 H8 O7 . x H3 N

CI COM

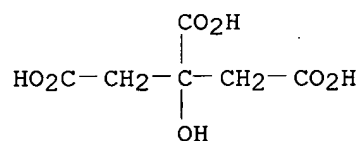
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS,
 CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DIOGENES, EMBASE, GMELIN*,
 IFICDB, IFIPAT, IFIUDB, PDLCOM*, PIRA, PROMT, RTECS*, TOXCENTER, TULSA,
 USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CRN (77-92-9)



●x NH3

652 REFERENCES IN FILE CA (1967 TO DATE)

3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

660 REFERENCES IN FILE CAPLUS (1967 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e potassium citrate/cn

E1 1 POTASSIUM CIS-DIAQUABIS(OXALATO)CHROMATE(1-)/CN

E2 1 POTASSIUM CIS-DIAQUADIOXALATOCHROMATE(1-)/CN

E3 3 --> POTASSIUM CITRATE/CN

E4 1 POTASSIUM CITRATE (K2H(O7C6H5))/CN

E5 1 POTASSIUM CITRATE (K2O7C6H6)/CN

E6 1 POTASSIUM CITRATE (KH2(O7C6H5))/CN

E7 1 POTASSIUM CITRATE, EFFERVESCENT/CN

E8 1 POTASSIUM CLAVULANATE/CN
 E9 1 POTASSIUM CLOFIBRATE/CN
 E10 1 POTASSIUM CLUSTER (K10)/CN
 E11 1 POTASSIUM CLUSTER (K12)/CN
 E12 1 POTASSIUM CLUSTER (K18)/CN

=> s e3

L7 3 "POTASSIUM CITRATE"/CN

=> d 17

L7 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 7778-49-6 REGISTRY

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, potassium salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Citric acid, potassium salt (8CI)

OTHER NAMES:

CN **Potassium citrate**

MF C6 H8 O7 . x K

CI COM

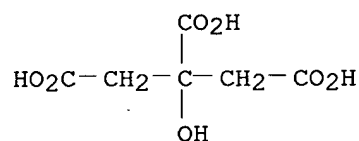
LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CHEMLIST, CTN, CSChem, DETHERM*, DIOGENES, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, PDLCOM*, PIRA, PROMT, TOXCENTER, TULSA, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CRN (77-92-9)



● x K

662 REFERENCES IN FILE CA (1967 TO DATE)

4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

666 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> e sodium citrate/cn

E1 1 SODIUM CITRAONATE/CN
 E2 1 SODIUM CITRAONATE-STYRENE COPOLYMER/CN
 E3 2 --> SODIUM CITRATE/CN
 E4 1 SODIUM CITRATE (NA2O7C6H6)/CN
 E5 1 SODIUM CITRATE (NA3C6D5O7)/CN
 E6 1 SODIUM CITRATE (NA3C6H5O7)/CN
 E7 1 SODIUM CITRATE (NAC6H7O7)/CN
 E8 1 SODIUM CITRATE ANHYDROUS/CN
 E9 1 SODIUM CITRATE DIHYDRATE/CN
 E10 1 SODIUM CITRATE HYDRATE/CN
 E11 1 SODIUM CITRATE PHOSPHATE/CN
 E12 1 SODIUM CLAVULANATE/CN

=> s e3

L8 2 "SODIUM CITRATE"/CN

=> d 18

L8 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2002 ACS

RN 994-36-5 REGISTRY

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, sodium salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Citric acid, sodium salt (8CI)

OTHER NAMES:

CN Bicitra

CN Pneucid

CN **Sodium citrate**

DR 7775-43-1

MF C6 H8 O7 . x Na

CI COM

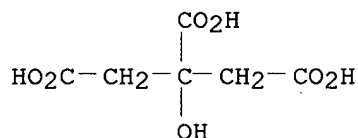
LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, DIOGENES, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, PDLCOM*, PIRA, PROMT, TOXCENTER, TULSA, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CRN (77-92-9)



⊗ x Na

2993 REFERENCES IN FILE CA (1967 TO DATE)

18 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2999 REFERENCES IN FILE CAPLUS (1967 TO DATE)

5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e citric acid/cn

E1 1 CITRIC .ALPHA.-CYCLOHEXYLAMIDE/CN

E2 1 CITRIC .BETA.-CYCLOHEXYLAMIDE/CN

E3 1 --> CITRIC ACID/CN

E4 1 CITRIC ACID 2-METHYLIMIDAZOLE SALT/CN

E5 1 CITRIC ACID 2-STEARYLOXYETHYL ESTER/CN

E6 1 CITRIC ACID CALCIUM MAGNESIUM SALT/CN

E7 1 CITRIC ACID CHLORALIDE/CN

E8 1 CITRIC ACID CHLORIDE/CN

E9 1 CITRIC ACID DIAMIDE/CN

E10 1 CITRIC ACID DISODIUM SALT TETRAHYDRATE/CN

E11 1 CITRIC ACID EUROPIUM(3+) SALT (2:1) TETRAHYDRATE/CN

E12 1 CITRIC ACID GADOLINIUM(3+) SALT (2:1) TETRAHYDRATE/CN

=> s e3

L9 1 "CITRIC ACID"/CN

=> d 19

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 77-92-9 REGISTRY

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Citric acid (8CI)

OTHER NAMES:

CN 2-Hydroxy-1,2,3-propanetricarboxylic acid

CN 3-Carboxy-3-hydroxypentane-1,5-dioic acid

CN Aciletten

CN Chemfill

CN Citretten

CN Citro

CN F 0001 (polycarboxylic acid)

CN Hydrocerol A

CN Uro-trainer

FS 3D CONCORD

DR 12262-73-6, 43136-35-2, 245654-34-6

MF C6 H8 O7

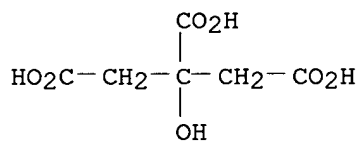
CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

37364 REFERENCES IN FILE CA (1967 TO DATE)

2475 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

37445 REFERENCES IN FILE CAPLUS (1967 TO DATE)

9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=>

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> s (slurry or cmp or (chemical mechanical polish?) or planariz? or polish?) and (semiconductor or substrate)

78691 SLURRY
7259 CMP
771020 CHEMICAL
206648 MECHANICAL
73604 POLISH?
1184 CHEMICAL MECHANICAL POLISH?
(CHEMICAL(W)MECHANICAL(W)POLISH?)
5206 PLANARIZ?
73604 POLISH?
377322 SEMICONDUCTOR
637266 SUBSTRATE

L10 17278 (SLURRY OR CMP OR (CHEMICAL MECHANICAL POLISH?) OR PLANARIZ? OR POLISH?) AND (SEMICONDUCTOR OR SUBSTRATE)

=> l0 and l4

3203071 10
11418 L4

L11 2250 10 AND L4

=> s l10 and l4

11418 L4

L12 6 L10 AND L4

=> d l12, 1-6, all

X L12 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 2002:309725 CAPLUS
DN 136:333824
TI **Chemical-mechanical polishing** methods using
various surfactants
IN Andreas, Michael T.
PA Micron Technology, Inc., USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM B24B001-00
NCL 451041000
CC 76-3 (Electric Phenomena)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6375548	B1	20020423	US 1999-475545	19991230
	US 2002052173	A1	20020502	US 2001-990706	20011120
PRAI	US 1999-475545	A3	19991230		

AB A chem.-mech. **polishing (CMP)** method includes applying a solid abrasive material to a **substrate**, **polishing** the **substrate**, flocculating at least a portion of the abrasive material, and removing at least a majority portion of the flocculated portion from the **substrate**. Applying solid abrasive material can include applying a **CMP slurry** or a **polishing** pad comprising abrasive material. Such a method can further include applying a surfactant comprising material to the **substrate** to assist in effectuating flocculation of the abrasive material. Such surfactant comprising material may be cationic which

includes, e.g., a quaternary NH₄⁺ substituted salt. Also, e.g., the surfactant comprising material may be applied during **polishing**, brush scrubbing, pressure spraying, or buffing.

ST chem mech **polishing** surfactant **slurry**

IT Alcohols, processes

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(C11-14, ethoxylated, Renex 36, **polishing** surfactant; chem.-mech. **polishing** methods using various surfactants)

IT Surfactants

(cationic; chem.-mech. **polishing** methods using various surfactants)

IT Abrasives

Flocculation

Surfactants

(chem.-mech. **polishing** methods using various surfactants)

IT Slurries

(chem.-mech. **polishing**; chem.-mech. **polishing** methods using various surfactants)

IT **Polishing**

(chem.-mech.; chem.-mech. **polishing** methods using various surfactants)

IT Quaternary ammonium compounds, processes

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(coco alkylbis(hydroxyethyl)methyl, ethoxylated, chlorides, Ethoquad C 25, **polishing** surfactant; chem.-mech. **polishing** methods using various surfactants)

IT Quaternary ammonium compounds, processes

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(polyethoxylated, **polishing** surfactants; chem.-mech. **polishing** methods using various surfactants)

IT 1306-38-3, Ceria, processes

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(**polishing** abrasive; chem.-mech. **polishing** methods using various surfactants)

IT **57-09-0**, Rhodaquat M 242B/99 6899-10-1, Cetyltrimethyl ammonium

9005-65-6, Alkamuls PSMO 20 9014-93-1, Igepal DM 710 24938-91-8, Renex 30 28724-32-5, Ethoquad 18/25 51811-79-1, Rhodafac RE 610 106392-12-5, Antarox P 104 167290-55-3, Surfynol CT-131 414869-50-4, Surfynol CT 141 414869-51-5, Surfynol CT 324 414869-66-2, Anti-Terra U 80

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(**polishing** surfactant; chem.-mech. **polishing** methods using various surfactants)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Andreas; US 6265781 B1 2001 CAPLUS

(2) Basi; US 4050954 A 1977 CAPLUS

(3) Brunner; US 5049200 A 1991

(4) George; US 6152148 A 2000 CAPLUS

(5) Grieger; US 5855811 A 1999 CAPLUS

(6) Grieger; US 6044851 A 2000 CAPLUS

(7) Malik; US 5078801 A 1992

(8) Muynh; US 5704987 A 1998

(9) Roy; US 5996594 A 1999 CAPLUS

(10) Shemo; US 6258140 B1 2001 CAPLUS

AN 2001:935926 CAPLUS
 DN 136:62548
 TI Aqueous ceria **slurry** with surfactants for decreased defects in
chemical-mechanical polishing of Si wafers
 IN Nojo, Haruki; Pandey, Sumit; Stephens, Jeremy; Ramachandran, Ravikumar
 PA Infineon Technologies North America Corp., USA; International Business
 Machines Corporation; Kabushiki Kaisha Toshiba
 SO PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM H01L021-306
 CC 76-3 (Electric Phenomena)
 Section cross-reference(s): 57

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001099170	A2	20011227	WO 2001-US19656	20010620
	WO 2001099170	A3	20020502		
	W: CN, JP, KR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				

PRAI US 2000-597125 A 20000620

AB The aq. **slurry** for chem.-mech. **polishing** of Si-
semiconductor wafers contains: (a) <5% by wt. of CeO2 powder as
 the abrasive particles; (b) cationic surfactant at <0.01M (up to crit.
 micelle concn.) of a cationic surfactant; (c) optional anionic surfactant
 at 2-6% by wt.; and (d) optional nonionic surfactant at .1to req.1% by wt.
 The cationic surfactant is typically C6-18-alkyl trimethylammonium and
 similar compds., esp. hexadecyl trimethylammonium bromide or cetyl
 pyridinium chloride. The aq. ceria **slurry** is prepd. with the
 neutral or alk. pH, and decreases the surface defects in **polishing**
 of Si wafers for integrated elec. circuits.

ST silicon wafer chem mech **polishing** aq **slurry**
 surfactant; ceria aq surfactant **slurry** **polishing**
semiconductor wafer

IT Surfactants
 (anionic, **polishing** **slurry** with; aq. ceria
slurry with surfactants for low defects in **polishing**
 of Si wafers)

IT Surfactants
 (cationic, **polishing** **slurry** with; aq. ceria
slurry with surfactants for low defects in **polishing**
 of Si wafers)

IT **Polishing**
 (chem.-mech.; aq. ceria **slurry** for decreased defects in
 chem.-mech. **polishing** of Si wafers)

IT Surfactants
 (nonionic, **polishing** **slurry** with; aq. ceria
slurry with surfactants for low defects in **polishing**
 of Si wafers)

IT **Semiconductor** materials
 (**polishing** of; aq. ceria **slurry** for decreased
 defects in chem.-mech. **polishing** of Si wafers)

IT Surfactants
 (**polishing** **slurry** with; aq. ceria **slurry**
 with surfactants for low defects in **polishing** of Si wafers)

IT Integrated circuits
 (wafers, **polishing** **slurry** for; aq. ceria
slurry with surfactants for low defects in **polishing**
 of Si wafers)

IT 57-09-0, Hexadecyl trimethylammonium bromide 123-03-5, Cetyl

pyridinium chloride 2016-56-0, Dodecylammonium acetate 3529-04-2,
Hexadecyl benzyl dimethylammonium bromide 7281-04-1, Dodecyl benzyl
dimethylammonium bromide 9002-89-5, Polyvinyl alcohol 9003-05-8,
Polyacrylamide

RL: MOA (Modifier or additive use); USES (Uses)

(**polishing slurry** contg.; aq. ceria **slurry**
for decreased defects in chem.-mech. **polishing** of Si wafers)

IT 1306-38-3, Ceria, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(powder, **polishing slurry** with; aq. ceria
slurry for decreased defects in chem.-mech. **polishing**
of Si wafers)

IT 7440-21-3, Silicon, processes

RL: EPR (Engineering process); PEP (Physical, engineering or chemical
process); PROC (Process)

(wafer, **polishing** of; aq. ceria **slurry** for
decreased defects in chem.-mech. **polishing** of Si wafers)

L12 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 2001:247428 CAPLUS

DN 134:267851

TI Aqueous slurryless compositions and methods for **chemical**
mechanical polishing silicon dioxide wafers with
reducing or eliminating scratches and defects

IN Nojo, Haruki; Schutz, Ronald J.; Ramachandran, Ravikumar

PA Infineon Technologies North America Corp., USA; International Business
Machines Corporation

SO PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C09G001-02

ICS H01L021-3105

CC 42-11 (Coatings, Inks, and Related Products)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001023486	A1	20010405	WO 2000-US24342	20000905
	W: CN, JP, KR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				
	PT, SE				
	US 6303506	B1	20011016	US 1999-409464	19990930
EP	1218466	A1	20020703	EP 2000-963316	20000905
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, FI, CY				

PRAI US 1999-409464 A 19990930

WO 2000-US24342 W 20000905

AB The **polishing** compn. comprises a cationic surfactant which is
sol. and ionized at neutral to alk. pH selected from an
alkyltrimethylammonium halide, an alkylbenzyltrimethylammonium halide, a
pyridiniumalkyl halide, and/or an alkylammonium ester, wherein the
cationic surfactant is present in an aq. **slurry**-less compn. in
an amt. less than its crit. micelle concn.

ST surfactant cationic compn chem mech **polishing**; silicon dioxide
polishing quaternary ammonium compd

IT Quaternary ammonium compounds, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(alkylbenzyltrimethyl, halides, cationic surfactants; aq. slurryless
comps. and methods for chem. mech. **polishing** silicon dioxide
wafers with reducing or eliminating scratches and defects)

IT Quaternary ammonium compounds, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (alkyltrimethyl, halides, cationic surfactants; aq. slurryless compns. and methods for chem. mech. **polishing** silicon dioxide wafers with reducing or eliminating scratches and defects)

IT **Polishing materials**
Semiconductor devices
 (aq. slurryless compns. and methods for chem. mech. **polishing** silicon dioxide wafers with reducing or eliminating scratches and defects)

IT Surfactants
 (cationic; aq. slurryless compns. and methods for chem. mech. **polishing** silicon dioxide wafers with reducing or eliminating scratches and defects)

IT **Polishing**
 (chem.-mech.; aq. slurryless compns. and methods for chem. mech. **polishing** silicon dioxide wafers with reducing or eliminating scratches and defects)

IT Pyridinium compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (halides, cationic surfactants; aq. slurryless compns. and methods for chem. mech. **polishing** silicon dioxide wafers with reducing or eliminating scratches and defects)

IT 7631-86-9, Silicon dioxide, miscellaneous
 RL: MSC (Miscellaneous)
 (aq. slurryless compns. and methods for chem. mech. **polishing** silicon dioxide wafers with reducing or eliminating scratches and defects)

IT 57-09-0, Hexadecyltrimethylammonium bromide 123-03-5,
 Cetylpyridinium chloride 2016-56-0, Dodecylammonium acetate 3529-04-2,
 Hexadecylbenzyltrimethylammonium bromide 7281-04-1,
 Dodecylbenzyltrimethylammonium bromide 9002-89-5, Polyvinyl alcohol
 9003-01-4, Poly(acrylic acid) 9003-05-8, Polyacrylamide 28214-57-5,
 Poly(ammonium acrylate)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aq. slurryless compns. and methods for chem. mech. **polishing** silicon dioxide wafers with reducing or eliminating scratches and defects)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
 (1) Hitachi Chem Co Ltd; JP 10102040 A 1998 CAPLUS
 (2) Hitachi Ltd; EP 0913442 A 1999 CAPLUS

L12 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS
 AN 1998:129438 CAPLUS
 DN 128:212327
 TI Synthesis, characterization and sensing application of novel **semiconductor** oxides
 AU Li, G. -J.; Kawi, S.
 CS Department of Chemical Engineering, National University of Singapore, Singapore, 119260, Singapore
 SO Talanta (1998), 45(4), 759-766
 CODEN: TLNTA2; ISSN: 0039-9140
 PB Elsevier Science B.V.
 DT Journal
 LA English
 CC 79-6 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 59
 AB Mesoporous SnO2 with high surface areas was synthesized using a cationic surfactant (N-cetyl-N,N,N-trimethylammonium bromide) as a synthetic template. The acidity of the starting synthesis **slurry** was used as one of the controlling parameters for the synthesis. After the SnO2 was synthesized at pH 7.15, it was calcined at 723 K for 10 h in air. It

had a BET surface area of 156.8 m²/g, with a pore diam. of 38.4 .ANG.. IR spectroscopy (FTIR) and thermal anal. techniques (thermogravimetry and DTA) showed that the surfactant was incorporated in the mesopores of SnO₂ and calcination in air at 673-723 K was needed to remove the surfactant completely from the mesopores. The effects of SnO₂ surface area on its gas-sensing properties were also investigated. It was obsd. that SnO₂ with higher surface areas had much higher sensitivities to hydrogen at 573 K.

ST tin oxide mesoporous prepn characterization sensor; cetyltrimethylammonium bromide mesoporous tin oxide sensor; hydrogen sensor mesoporous tin oxide
 IT 1333-74-0, Hydrogen, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (detn. of; synthesis, characterization and sensing application of novel high-surface-area mesoporous SnO **semiconductor** oxides)
 IT **57-09-0**, N-Cetyl-N,N,N-trimethylammonium bromide
 RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
 (in synthesis of novel high-surface-area mesoporous SnO **semiconductor** oxides)
 IT 18282-10-5, Tin oxide (SnO₂)
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (mesoporous; synthesis, characterization and sensing application of novel high-surface-area mesoporous SnO **semiconductor** oxides)

L12 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 1979:179048 CAPLUS

DN 90:179048

TI Post-**polishing** cleaning of **semiconductor** surfaces

IN Basi, Jagtar S.

PA International Business Machines Corp., USA

SO U.S., 3 pp.

CODEN: USXXAM

DT Patent

LA English

IC B08B003-08

NCL 134002000

CC 76-13 (Electric Phenomena)

FAN.CNT 1

surfact used as cleaner

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4129457	A	19781212	US 1977-799886	19770523
	JP 54000862	A2	19790106	JP 1978-28784	19780315
	JP 56045295	B4	19811026		
	GB 1575858	A	19801001	GB 1978-12121	19780328
	FR 2391830	A1	19781222	FR 1978-11798	19780414
	FR 2391830	B1	19801031		
	DE 2820608	A1	19781130	DE 1978-2820608	19780511
	PRAI US 1977-799886		19770523		

AB **Semiconductor** surfaces are cleaned after **polishing** with a **slurry** contg. colloidal SiO₂. The colloidal SiO₂ is removed by using an aq. quaternary ammonium salt soln. contg. .gtoreq.0.1 wt.% of the salt, which can be represented by the formula: [R₁R₂R₃R₄N⁺] X⁻, where R₁ is a long-chain alkyl group contg. .apprx.12-18 carbons; R₂, R₃, and R₄ are selected from the group consisting of lower alkyl groups and substituted lower alkyl groups with 1-7 carbons; X⁻ is an anion. The SiO₂ is coagulated and suspended in soln. An aq. NH₄OH soln. contg. .apprx.3-5 wt.% NH₄OH is used to remove heavy metal ion contaminants. Examples are given showing the use of (a) a 0.5 wt.% soln. of mixed alkyl (C12-C18) dimethylbenzyl ammonium chlorides and (b) a 0.5 wt.% soln. of cetyldimethylethyl ammonium bromide or cetyltrimethylammonium bromide.
 ST silica removal **polished** silicon; quaternary ammonium salt silica

removal; hydride ammonium cleaning silicon
 IT Quaternary ammonium compounds, uses and miscellaneous
 RL: USES (Uses)
 (in cleaning of silicon surfaces after **polishing**)
 IT **Polishing**
 (of silicon with colloidal silica, cleaning after)
 IT 7631-86-9, uses and miscellaneous
 RL: USES (Uses)
 (colloidal, **polishing** of silicon with, cleaning after)
 IT **57-09-0** 122-18-9 122-19-0 124-03-8 139-07-1 139-08-2
 1336-21-6
 RL: USES (Uses)
 (in cleaning of silicon surfaces after **polishing**)
 IT 7440-21-3, uses and miscellaneous
 RL: USES (Uses)
 (**polishing** of, with colloidal silica, cleaning after)

L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 1967:501302 CAPLUS

DN 67:101302

TI Soiling and detergency. III. Detergency experiments with particulate carbon soils

AU Grindstaff, Teddy H.; Patterson, Hugh T.; Billica, Harry R.

CS E. I. du Pont de Nemours and Co. Inc., Kinston, N. C., USA

SO Text. Res. J. (1967), 37(7), 564-73

CODEN: TRJOA9

DT Journal

LA English

CC 46 (Surface Active Agents and Detergents)

AB cf. CA 64: 19864f. The use of Na lauryl sulfate (I), cetyltrimethylammonium bromide (II), and nonylphenyl polyethylene glycol (III) as surfactant solns. to desorb hydrophobic and hydrophilic particulate 14C from nylon, poly(ethylene terephthalate) and cellulose fabrics and films was studied in the presence and absence of fatty soil. Fatty soil was prepd. by mixing glyceryl tristearate 30, stearic acid 30, octadecyl alc. 20, and octadecane 20% in CCl4 to give a concn. of 8 mg./ml. Particulate C soil was prepd. by suspending 20 mg. hydrophobic 14C in 50 ml. CCl4 to give a 0.005 mc./mg. activity soln. Film samples were mounted drumhead fashion over the end of a gasflow Geiger tube and were solid by depositing 8 mg. of fatty soil on the film and evapg. the solvent, then 1 ml. aliquot of a 20 mg. tagged particulate C in 50 ml. CCl4 was pipetted onto the film, the solvent evapd., and the soiled film **polished**. Desorption isotherms were obtained by submerging of 300-ml. aliquot surfactant solns. beneath the Geiger tubes. Fabric samples were mounted on rings and were soiled as above. Sorption data were obtained by stirring for 15 min. 300 ml. of a soln. contg. 0.8 mg. 14C and the detergent with a 1.5-in.-diam. fabric sample and detg. the activity after they had dried. The effect of the amt. of C on the surface, polymer **substrate** type, surfactant type, temp., fatty soil, wettability of the particulate soil, and bleach were studied and presented graphically. Results showed that hydrophilic C was easier to remove than hydrophobic C, and that the addn. of hypochlorite bleach to anionic surfactant solns. increased their ability to remove hydrophobic C. The presence of fatty soil did not significantly decrease the extent of removal of particulate C from fabric samples. Particulate C was easier to remove from cellulose than from polyester and nylon films.

ST LAURYL SULFATE SURFACTANTS; CETYLTRIMETHYLAMMONIUM SURFACTANTS; POLYETHYLENE GLYCOL SURFACTANTS; NYLON DETERGENTS; POLYETHYLENE TEREPHTHALATE DETERGENTS; CELLULOSE DETERGENTS

IT Nylon, uses and miscellaneous

RL: USES (Uses)

(detergents for, soiled with particulate carbon)

IT Detergency
 (detn. of, particulate carbon soils in)
 IT Detergents, uses and miscellaneous
 (for carbon soil removal from cotton textiles, nylon, polyesters, etc.)
 IT Glycols, polyethylene, mono(nonylphenyl) ether
 Phenol, nonyl-, monoether with polyethylene glycol
 RL: PRP (Properties)
 (detergency of, detn. of, particulate carbon soils in)
 IT 57-09-0 151-21-3, properties
 RL: PRP (Properties)
 (detergency of, detn. of, particulate carbon soils in)
 IT 9003-68-3, uses and miscellaneous
 RL: USES (Uses)
 (detergents for, soiled with particulate carbon)
 IT 9004-34-6, uses and miscellaneous
 RL: USES (Uses)
 (regenerated, detergents for films of, soiled with particulate carbon)

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002
 E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L1 1 S E3
 L2 0 DH IS

FILE 'CA' ENTERED AT 09:16:30 ON 23 AUG 2002

L3 11385 S L1

FILE 'REGISTRY' ENTERED AT 09:19:05 ON 23 AUG 2002
 E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L4 1 S E3
 E CETYLTRIMETHYLAMMONIUM CHLORIDE/CN
 L5 1 S E3
 E AMMONIUM BICITRATE/CN
 E AMMONIUM DICITRATE/CN
 E AMMONIUM CITRATE/CN
 L6 3 S E3
 E POTASSIUM CITRATE/CN
 L7 3 S E3
 E SODIUM CITRATE/CN
 L8 2 S E3
 E CITRIC ACID/CN
 L9 1 S E3

FILE 'CAPLUS' ENTERED AT 09:47:11 ON 23 AUG 2002

L10 17278 S (SLURRY OR CMP OR (CHEMICAL MECHANICAL POLISH?) OR PLANARIZ?
 L11 2250 10 AND L4
 L12 6 S L10 AND L4

=> s l10 and l5

3164 L5
 L13 3 L10 AND L5

=> d l13, 1-3,all

L13 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
 AN 2001:137315 CAPLUS
 DN 134:194692
 TI Polishing system with stopping compound and method of its use

IN Wang, Shumin; Kaufman, Vlasta Brusic; Grumbine, Steven K.; Cherian, Isaac K.
 PA Cabot Microelectronics Corporation, USA
 SO PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C09G001-02
 CC 42-11 (Coatings, Inks, and Related Products)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
X PI	WO 2001012741	A1	20010222	WO 2000-US21952	20000810
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1218465	A1	20020703	EP 2000-952726	20000810
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRAI	US 1999-148813P	P	19990813		
	WO 2000-US21952	W	20000810		

AB The invention provides a system for **polishing** one or more layers of a multi-layer **substrate** that includes a first metal layer and a second layer comprising: (i) a liq. carrier, (ii) at least one oxidizing agent, (iii) at least one **polishing** additive that increases the rate at which the system **polishes** at least one layer of the **substrate**, (iv) at least one stopping compd. with a **polishing** selectivity of the first metal layer:second layer of at least about 30:1, wherein the stopping compd. is a cationically charged nitrogen contg. compd. selected from compds. comprising amines, imines, amides, imides, and mixts. thereof, and (v) a **polishing** pad and/or an abrasive. The invention also provides a method of **polishing** a **substrate** comprising contacting a surface of a **substrate** with the system and **polishing** at least a portion of the **substrate** therewith. Moreover, the invention provides a method for **polishing** one or more layers of a multi-layer **substrate** that includes a first metal layer and a second layer comprising: a) contacting the first metal layer with the system, and b) **polishing** the first metal layer with the system until at least a portion of the first metal layer is removed from the **substrate**. Moreover, the present invention provides a compn. for **polishing** one or more layers of a multi-layer **substrate** that includes a first metal layer and a second layer comprising: (i) liq. carrier, (ii) at least one oxidizing agent, (iii) at least one **polishing** additive that increases the rate at which the system **polishes** at least one layer of the **substrate**, (iv) at least one stopping compd. with a **polishing** selectivity of the first metal layer:second layer of at least about 30:1, wherein the stopping compd. is a cationically charged nitrogen contg. compd. selected from compds. comprising amines, imines, amides, imides, and mixts. thereof, to be used with (v) a **polishing** pad and/or an abrasive.

ST **polish** abrasive stopping agent
 IT Abrasives
 Oxidizing agents
 Polishing materials
 (polishing system with stopping compd. and method of its use)

IT Amides, uses
 Amines, uses
 Carboxylic acids, uses
 Imides
 Imines
 RL: MOA (Modifier or additive use); USES (Uses)
 (**polishing** system with stopping compd. and method of its use)

IT Peroxides, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**polishing** system with stopping compd. and method of its use)

IT Polyethers, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyamine-; **polishing** system with stopping compd. and method of its use)

IT Polyamines
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyether-; **polishing** system with stopping compd. and method of its use)

IT 56-18-8, N-(3-Aminopropyl)-1,3-propane diamine 56-87-1, Lysine, uses
 64-04-0, 2-Phenylethylamine 87-69-4, Tartaric acid, uses 96-20-8
 107-10-8, Propylamine, uses 109-55-7 **112-02-7**, Cetyltrimethyl
 ammonium chloride) 112-57-2, Tetraethylene-pentamine 124-09-4,
 Hexamethylenediamine, uses 616-29-5, 1,3-Diamino-2-propanol 929-06-6
 1122-28-7, 1H-Imidazole-4,5-dicarbonitrile 2809-21-4, Dequest 2010
 2855-13-2, Isophorone diamine 3312-60-5, N-Cyclohexyl-1,3-propane
 diamine 4246-51-9, 4,7,10-Trioxatridecane-1,13-diamine 6419-19-8,
 Dequest 2000 6864-37-5, 3,3'-Dimethyl-4,4'-diaminodicyclohexylmethane
 7209-38-3, 1,4-Bis(3-amino propyl) piperazine 9002-98-6,
 Polyethylenimine 10563-29-8 15827-60-8, Dequest 2060 16854-32-3,
 Thiomicamine 27195-72-8, Tetramethylbutanediamine 54303-31-0,
 3-[2-Methoxyethoxy]propylamine 316356-99-7, Lupasol SKA
 RL: MOA (Modifier or additive use); USES (Uses)
 (**polishing** system with stopping compd. and method of its use)

IT 1306-38-3, Ceria, uses 1310-53-8, Germania, uses 1314-23-4, Zirconia,
 uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7722-84-1,
 Hydrogen peroxide, uses 13463-67-7, Titania, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**polishing** system with stopping compd. and method of its use)

IT 7440-25-7, Tantalum, miscellaneous 7440-50-8, Copper, miscellaneous
 RL: MSC (Miscellaneous)
 (wafers; **polishing** system with stopping compd. and method of its use)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Cabot Corp; EP 0846742 A 1998 CAPLUS
- (2) Cabot Corp; EP 0896042 A 1999 CAPLUS
- (3) Higuchi, M; US 5770095 A 1998 CAPLUS \$

L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 2001:137314 CAPLUS

DN 134:194691

TI **Polishing** system and method of its use

IN Wang, Shumin; Kaufman, Vlasta Brusic; Grumbine, Steven K.; Zhou, Renjie;
 Cherian, Isaac K.

PA Cabot Microelectronics Corporation, USA

SO PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C09G001-02

CC 42-11 (Coatings, Inks, and Related Products)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001012740	A1	20010222	WO 2000-US21938	20000810
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1226220	A1	20020731	EP 2000-953960	20000810
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRAI	US 1999-148813P	P	19990813		
	WO 2000-US21938	W	20000810		
OS	MARPAT 134:194691				
AB	<p>The invention provides a system for polishing one or more layers of a multi-layer substrate that includes a first metal layer and a second layer comprising (i) a liq. carrier, (ii) at least one oxidizing agent, (iii) at least one polishing additive that increases the rate at which the system polishes at least one layer of the substrate, wherein the polishing additive is selected from the group consisting of pyrophosphates, condensed phosphates, phosphonic acids and salts thereof, amines, amino alcs., amides, imines, imino acids, nitriles, nitros, thiols, thioesters, thioethers, carbothiolic acids, carbothionic acids, thiocarboxylic acids, thiosalicylic acids, and mixts. thereof, and (iv) a polishing pad and/or an abrasive. The invention also provides a method of polishing a substrate comprising contacting a surface of a substrate with the system and polishing at least a portion of the substrate therewith. Moreover, the invention provides a method for polishing one or more layers of a multi-layer substrate that includes a first metal layer and a second layer comprising (a) contacting the first metal layer with the system, and (b) polishing the first metal layer with the system until at least a portion of the first metal layer is removed from the substrate.</p>				
ST	polish oxidizing agent additive abrasive				
IT	Alcohols, uses				
	RL: MOA (Modifier or additive use); USES (Uses)				
	(amino; polishing system and method of its use)				
IT	Carboxylic acids, uses				
	RL: MOA (Modifier or additive use); USES (Uses)				
	(imino; polishing system and method of its use)				
IT	Abrasives				
	Oxidizing agents				
	Polishing materials				
	(polishing system and method of its use)				
IT	Amides, uses				
	Amines, uses				
	Imines				
	Nitriles, uses				
	Thioethers				
	Thiols (organic), uses				
	RL: MOA (Modifier or additive use); USES (Uses)				
	(polishing system and method of its use)				
IT	Peroxides, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(polishing system and method of its use)				
IT	Esters, uses				

RL: MOA (Modifier or additive use); USES (Uses)
 (thio; **polishing** system and method of its use)

IT Carboxylic acids, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (thiocarboxylic; **polishing** system and method of its use)

IT 112-02-7, Cetyltrimethyl ammonium chloride
 RL: MOA (Modifier or additive use); USES (Uses)
 (Varisoft 300; **polishing** system and method of its use)

IT 56-18-8, N-(3-Aminopropyl)-1,3-propane diamine 56-87-1, Lysine, uses
 68-11-1, Thioglycolic acid, uses 87-69-4, Tartaric acid, uses 95-45-4,
 Dimethylglyoxime 96-20-8, 2-Amino-1-butanol 107-10-8, Propylamine,
 uses 107-15-3, Ethylenediamine, uses 111-41-1 111-51-3,
 N,N,N',N'-Tetramethyl-1,4-butanediamine 112-57-2, Tetraethylenepentamine
 124-09-4, Hexamethylene-diamine, uses 142-73-4, Iminodiacetic acid
 506-93-4, Guanidine nitrate 616-29-5, 1,3-Diamino-2-propanol 628-87-5,
 Iminodiacetonitrile 929-06-6, 2-(2-Aminoethoxy)ethanol 1122-28-7,
 1H-Imidazole-4,5-dicarbonitrile 2809-21-4, Dequest 2010 2855-13-2,
 Isophorone diamine 3312-60-5, N-Cyclohexyl-1,3-propane diamine
 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 4408-78-0,
 Phosphonoacetic acid 5994-61-6, N-Phosphono-methyliminodiacetic acid
 6419-19-8, Dequest 2000 7209-38-3, 1,4-Bis(3-aminopropyl) piperazine
 7320-34-5, Potassium pyrophosphate 9002-98-6, Lupasol P 15827-60-8,
 Dequest 2060 16854-32-3, Thiomicamine 19847-12-2, Pyrazine
 carbonitrile 36465-90-4, Di-phosphonic acid 116770-99-1, Lupasol
 SC-61B 316356-99-7, Lupasol SKA
 RL: MOA (Modifier or additive use); USES (Uses)
 (**polishing** system and method of its use)

IT 1306-38-3, Ceria, uses 1310-53-8, Germania, uses 1314-23-4, Zirconia,
 uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7722-84-1,
 Hydrogen peroxide, uses 13463-67-7, Titania, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**polishing** system and method of its use)

IT 7440-25-7, Tantalum, processes 7440-50-8, Copper, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (wafers; **polishing** system and method of its use)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
 (1) Cabot Corp; EP 0896042 A 1999 CAPLUS
 (2) Fujimi Inc; EP 0845512 A 1998 CAPLUS

X L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
 AN 1996:255547 CAPLUS
 DN 124:344944
 TI Structure-property relationship PVA-SbQ water soluble photosensitive
 polymer and its application to screening process of color monitor
 AU Park, Lee Soon; Han, Yoon Soo; Kim, Bong chul
 CS Dept. Polymer Sci., Kyungpook Nat'l Univ., Taegu, 702-701, S. Korea
 SO Kongop Hwahak (1996), 7(2), 379-86
 CODEN: KOHWE9; ISSN: 1225-0112
 PB Korean Society of Industrial and Engineering Chemistry
 DT Journal
 LA Korean
 CC 37-5 (Plastics Manufacture and Processing)
 Section cross-reference(s): 74
 AB Photosensitive compd., 1-methyl-4-[2-(4-diethylacetylphenyl)ethenyl]
 pyridinium methosulfate (SbQ-A salt), was synthesized from di-Me sulfate,
 terephthalaldehyde mono(diethylacetal) and 4-picoline. SbQ-A salts were
 reacted with poly(vinyl alcs.) (PVA) in aq. soln. with phosphoric acid as
 catalyst to give photosensitive PVA-SbQ with different SbQ content and
 mol. wt. Relative photosensitivity of PVA-SbQ was detd. by gray scale
 method. The relative sensitivity of PVA-SbQ increased with increasing
 amt. of bound SbQ in the case of high mol. wt. (MW = 77,000-79,000 g/mol)

as **substrate** and decreased with decreasing mol. wt. of PVA with about const. (1.3 mol.%) amt. of bound SbQ. The most sensitive polymer was obtained with SbQ group content in PVA-SbQ reached about 2.63 mol.% in the case of high mol. wt. (77,000-79,000 g/mol) PVA. The sample showed 90 times greater sensitivity than dichromated PVA as red. photosensitive system. PVA-SbQ photosensitive polymer synthesized was applied to the photolithog. screening process of phosphor on the panel of cathode ray tube. Phosphor **slurry** was made with PVA-SbQ, phosphor, a small amt. of surfactant and other additives using water as medium. The **slurry** was coated onto panel, dried by heater, exposed to UV light and then developed by distd. water. When a small amt. of cationic surfactant such as cetyltrimethylammonium chloride was used in the **slurry** formulation, the sharpness of phosphor pattern was equal to or better than that of dichromated PVA photosensitive polymer system used currently.

- ST polyvinyl alc photosensitive screening color monitor;
methyldiethylacetylphenylethenyl pyridinium methosulfate photosensitive polyvinyl alc
- IT Light-sensitive materials
(structure-property relation of photosensitive poly(vinyl alc.)-methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate and application to screening process of color monitor)
- IT Surfactants
(anionic, photosensitive poly(vinyl alc.)-methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate for screening process of color monitor contg.)
- IT Surfactants
(cationic, photosensitive poly(vinyl alc.)-methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate for screening process of color monitor contg.)
- IT Surfactants
(nonionic, photosensitive poly(vinyl alc.)-methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate for screening process of color monitor contg.)
- IT Lithography
(photo-, structure-property relation of photosensitive poly(vinyl alc.)-methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate and application to screening process of color monitor)
- IT 77-78-1, Dimethyl sulfate 108-89-4, 4-Picoline 81172-89-6,
Terephthalaldehyde mono(diethylacetal)
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of photosensitive methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate)
- IT 172669-38-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of photosensitive methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate)
- IT 9002-89-5DP, Poly(vinyl alcohol), reaction products with pyridine derivs.
172669-38-4DP, reaction products with poly(vinyl alc.)
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(structure-property relation of photosensitive poly(vinyl alc.)-methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate and application to screening process of color monitor)
- IT 75-57-0, Tetramethylammonium chloride 112-02-7,
Cetyltrimethylammonium chloride 130-14-3, Sodium 1-naphthalenesulfonate 150-90-3, Sodium succinate 1338-43-8, Sorbitan monooleate 2386-53-0, Sodium dodecylsulfonate 9005-64-5, Polyethylene glycol sorbitan monolaurate 9005-65-6, Polyethylene glycol sorbitan monooleate 25322-68-3D, Polyethylene glycol, derivs. 38746-10-0,
1-Methylquinolinium methyl sulfate
RL: TEM (Technical or engineered material use); USES (Uses)

(surfactants; photosensitive poly(vinyl alc.)-
methyl[(diethylacetylphenyl)ethenyl] pyridinium methosulfate for
screening process of color monitor contg.)

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002

E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L1 1 S E3

L2 0 DH IS

FILE 'CA' ENTERED AT 09:16:30 ON 23 AUG 2002

L3 11385 S L1

FILE 'REGISTRY' ENTERED AT 09:19:05 ON 23 AUG 2002

E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L4 1 S E3

E CETYLTRIMETHYLAMMONIUM CHLORIDE/CN

L5 1 S E3

E AMMONIUM BICITRATE/CN

E AMMONIUM DICITRATE/CN

E AMMONIUM CITRATE/CN

L6 3 S E3

E POTASSIUM CITRATE/CN

L7 3 S E3

E SODIUM CITRATE/CN

L8 2 S E3

E CITRIC ACID/CN

L9 1 S E3

FILE 'CAPLUS' ENTERED AT 09:47:11 ON 23 AUG 2002

L10 17278 S (SLURRY OR CMP OR (CHEMICAL MECHANICAL POLISH?) OR PLANARIZ?

L11 2250 10 AND L4

L12 6 S L10 AND L4

L13 3 S L10 AND L5

=> s (l6 and l7) and l10

1283 L6

1334 L7

L14 0 (L6 AND L7) AND L10

=> s (l6 and l8) and l10

1283 L6

7221 L8

L15 0 (L6 AND L8) AND L10

=> s (l7 and l9) and l10

1334 L7

37474 L9

L16 2 (L7 AND L9) AND L10

=> d l16, 1-2, all

L16 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 2000:415424 CAPLUS

DN 133:25377

TI **Chemical-mechanical polishing slurry**

for solid-state device fabrication

IN Lee, Kevin J.

PA Intel Corp., USA
 SO U.S., 8 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM H01L021-461
 NCL 106003000
 CC 76-3 (Electric Phenomena)
 Section cross-reference(s): 66
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6077337	A	20000620	US 1998-203432	19981201
	US 6214098	B1	20010410	US 2000-504191	20000215
	US 6346144	B1	20020212	US 2000-723092	20001127
PRAI	US 1998-203432	A1	19981201		
	US 2000-504191	A1	20000215		

AB One embodiment of the present invention includes a chem.-mech.

polishing (CMP) slurry. The **slurry** is comprised of one or more ferrocenium salts that is or are reduced, during use, to ferrocene. The **slurry** also includes an abrasive and a concn. of hydronium ions effective to impart a pH of <7.

ST ferrocenium salt **CMP slurry**

IT Abrasives

Buffers

Contact holes

Semiconductor device fabrication

Slurries

(chem.-mech. **polishing slurry** for solid-state device fabrication)

IT Acids, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(chem.-mech. **polishing slurry** for solid-state device fabrication)

IT **Polishing**

(chem.-mech.; chem.-mech. **polishing slurry** for solid-state device fabrication)

IT Reduction

(in chem.-mech. **polishing slurry** for solid-state device fabrication)

IT Interconnections (electric)

(vias; chem.-mech. **polishing slurry** for solid-state device fabrication)

IT Tungsten alloy

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(chem.-mech. **polishing slurry** for solid-state device fabrication)

IT 7440-33-7, Tungsten, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(chem.-mech. **polishing slurry** for solid-state device fabrication)

IT 102-54-5P, Ferrocene

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chem.-mech. **polishing slurry** for solid-state device fabrication)

IT 102-54-5D, Ferrocene, salts

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(chem.-mech. **polishing slurry** for solid-state device fabrication)

19981201 citric acid/L-citrate

device fabrication)
IT 64-19-7, Acetic acid, uses 77-92-9, uses 7631-86-9, Silica,
uses 7778-49-6, Potassium citrate
RL: TEM (Technical or engineered material use); USES (Uses)
(chem.-mech. **polishing slurry** for solid-state
device fabrication)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Adams; US 5755614 1998
- (2) Cadien; US 5340370 1994 CAPLUS
- (3) Cadien; US 5516346 1996 CAPLUS
- (4) Cadien; US 5604158 1997 CAPLUS
- (5) Cadien; US 5611943 1997
- (6) Chau; US 5625217 1997 CAPLUS
- (7) Chiang; US 5739579 1998
- (8) Danielson; US 5407526 1995 CAPLUS
- (9) Dub, M; Organometallic Compounds 1966, V1, P226
- (10) Feller; US 5700383 1997 CAPLUS
- (11) Huang; US 5635423 1997 CAPLUS
- (12) Huang; US 5700726 1997 CAPLUS
- (13) Mu; US 5612254 1997 CAPLUS
- (14) Murarka; US 5637185 1997
- (15) Pauson; US 2680756 1954 CAPLUS
- (16) Rockett; Journal of Organometallic Chemistry 1981, V211, P215 CAPLUS
- (17) Vacha; US 4874222 1989 CAPLUS
- (18) Wilkerson, G; The Journal of the American Chemical Society 1952, VLXXIV

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 1998:8186 CAPLUS

DN 128:91857

TI Abrasive slurries for fine **chemical-mechanical**
polishing of aluminum or titanium aluminide films

IN Feller, A. Daniel; Cadien, Kenneth C.

PA Intel Corp., USA

SO U.S., 11 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C23F003-00

ICS C23F001-44

NCL 216088000

CC 56-6 (Nonferrous Metals and Alloys)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5700383	A	19971223	US 1995-577243	19951221
AB	The Al or Ti aluminide films for use in integrated elec.-circuit manuf. are polished with aq. slurry contg.: (a) fine abrasive powder, esp. SiO ₂ ; (b) an oxidant or water; (c) halogen, esp. a fluoride; and (d) a chelating agent, esp. citric acid. The slurry for polishing of Al film on a substrate typically contains SiO ₂ powder, <u>KF, and citric acid</u> , and is used at the pH of 4-9. The Ti aluminide film is typically polished at pH of 2-4 using the aq. slurry contg. SiO ₂ powder .apprx.2% and citric acid (for chelating) at .apprx.1.5 g/L. The 2 slurries are compatible in chem.-mech. polishing of the 2-layer Al-Ti aluminide films for integrated elec. circuits, esp. to remove excess metal for local elec. connections.				
ST	chem mech polishing elec circuit film; aluminum film polishing aq slurry silica; titanium aluminide film polishing silica slurry				

IT **Polishing**
 (chem.-mech.; slurries for fine chem.-mech. **polishing** of
 aluminum or titanium aluminide films)

IT Integrated circuits
 (films on, **polishing** of; slurries for fine chem.-mech.
polishing of aluminum or titanium aluminide films)

IT 11107-74-7
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (aluminide films, **polishing** of; slurries for fine chem.-mech.
polishing of aluminum or titanium aluminide films)

IT 7429-90-5, Aluminum, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (films, **polishing** of; slurries for fine chem.-mech.
polishing of aluminum or titanium aluminide films)

IT 77-92-9, Citric acid, uses 7778-49-6, Potassium citrate
 7789-23-3, Potassium fluoride 16984-48-8, Fluoride, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (**polishing slurry** with; slurries for fine
 chem.-mech. **polishing** of aluminum or titanium aluminide
 films)

IT 7631-86-9, Silica, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (powder, **polishing slurry** with; slurries for fine
 chem.-mech. **polishing** of aluminum or titanium aluminide
 films)

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002

E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L1 1 S E3
 L2 0 DH IS

FILE 'CA' ENTERED AT 09:16:30 ON 23 AUG 2002

L3 11385 S L1

FILE 'REGISTRY' ENTERED AT 09:19:05 ON 23 AUG 2002

E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L4 1 S E3
 E CETYLTRIMETHYLAMMONIUM CHLORIDE/CN
 L5 1 S E3
 E AMMONIUM BICITRATE/CN
 E AMMONIUM DICITRATE/CN
 E AMMONIUM CITRATE/CN
 L6 3 S E3
 E POTASSIUM CITRATE/CN
 L7 3 S E3
 E SODIUM CITRATE/CN
 L8 2 S E3
 E CITRIC ACID/CN
 L9 1 S E3

FILE 'CAPLUS' ENTERED AT 09:47:11 ON 23 AUG 2002

L10 17278 S (SLURRY OR CMP OR (CHEMICAL MECHANICAL POLISH?) OR PLANARIZ?
 L11 2250 10 AND L4
 L12 6 S L10 AND L4
 L13 3 S L10 AND L5
 L14 0 S (L6 AND L7) AND L10
 L15 0 S (L6 AND L8) AND L10

L16 2 S (L7 AND L9) AND L10

=> s (l8 and l9) and l10

7221 L8

37474 L9

L17 5 (L8 AND L9) AND L10

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002

E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L1 1 S E3

L2 0 DH IS

FILE 'CA' ENTERED AT 09:16:30 ON 23 AUG 2002

L3 11385 S L1

FILE 'REGISTRY' ENTERED AT 09:19:05 ON 23 AUG 2002

E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L4 1 S E3

E CETYLTRIMETHYLAMMONIUM CHLORIDE/CN

L5 1 S E3

E AMMONIUM BICITRATE/CN

E AMMONIUM DICITRATE/CN

E AMMONIUM CITRATE/CN

L6 3 S E3

E POTASSIUM CITRATE/CN

L7 3 S E3

E SODIUM CITRATE/CN

L8 2 S E3

E CITRIC ACID/CN

L9 1 S E3

FILE 'CAPLUS' ENTERED AT 09:47:11 ON 23 AUG 2002

L10 17278 S (SLURRY OR CMP OR (CHEMICAL MECHANICAL POLISH?) OR PLANARIZ?

L11 2250 10 AND L4

L12 6 S L10 AND L4

L13 3 S L10 AND L5

L14 0 S (L6 AND L7) AND L10

L15 0 S (L6 AND L8) AND L10

L16 2 S (L7 AND L9) AND L10

L17 5 S (L8 AND L9) AND L10

=> d l17, 1-5, all

L17 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2002 ACS

AN 2002:58815 CAPLUS

DN 136:92385

TI Technology and application of pulse electrodeposition

IN Zhang, Shaohe

PA Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.

CODEN: CNXXEV

DT Patent

LA Chinese

IC ICM C25D005-18

ICS C25D015-00

CC 72-8 (Electrochemistry)

Section cross-reference(s): 49

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1300883	A	20010627	CN 2000-126703	20001122
AB	<p>The technol. comprises pretreating diamond, prepg. plating bath, pretreating substrate, electroplating, and post treatment. The diamond pretreatment comprises boiling diamond (JR4 type 50/60-70/80 mesh) in 5% NaOH soln. for 3-5 min, washing, dipping in 10% HCl for .apprx.5 min, washing, mixing with H2O and Na dodecyl sulfate, boiling, washing, and dipping in Ni-W plating bath for >12 h. The plating bath contains Na2WO4 50-80, Na citrate 50- 180, NiSO4 10-70, NH4Cl 10-40, and citric acid 15-30 g L-1. The pH value of the plating bath is 4-9, and its temp. is 30 .PHI.+ 1.PHI.'. The substrate pretreatment process comprises polishing, removing rust and oil in a soln. contg. NaOH 10-15, Na2CO3 20-25, and Na3PO4 30-40 g L-1 at 3.0-5.0 A dm- 2, and activating in a soln. contg. 250-300 g L-1 KOH at 50-60.PHI.'. The electrodeposition process comprises impact electrodeposition at pulse frequency 1000 Hz, duty ratio 25%, and c.d. 4.0 A dm-2 for 10 min, depositing at pulse frequency 1000 Hz, duty ratio 25%, and c.d. 1.0-2.5 A dm-2 for 30 min, scattering pretreated diamond on the substrate, electroplating, removing unwanted diamond, and repeating the scattering, plating, and unwanted diamond-removing process for several times. The post treatment process comprises heating at 200-250.PHI.' for 2-3 h. The technol. was used for manuf. of Ni-W alloy diamond drilling bits or tools.</p>				
ST	pulse electrodeposition diamond nickel tungsten drill				
IT	Drills				
	(pretreatment and electrodeposition and post-treatment method for nickel-tungsten alloy used as drill bits)				
IT	Electrodeposition				
	(pulse; pretreatment and electrodeposition and post-treatment method for nickel-tungsten alloy used as drill bits)				
IT	37264-44-1				
	RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(pretreatment and electrodeposition and post-treatment method for nickel-tungsten alloy used as drill bits)				
IT	68-04-2, Sodium citrate 77-92-9, Citric acid, uses				
	151-21-3, Sodium dodecyl sulfate, uses 497-19-8, Sodium carbonate, uses 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 7601-54-9, TriSodium phosphate 7647-01-0, Hydrochloric acid, uses 12125-02-9, Ammonium chloride, uses				
	RL: NUU (Other use, unclassified); USES (Uses)				
	(pretreatment and electrodeposition and post-treatment method for nickel-tungsten alloy used as drill bits)				
IT	7786-81-4, Nickel sulfate 13472-45-2, Sodium tungstate				
	RL: RCT (Reactant); RACT (Reactant or reagent)				
	(pretreatment and electrodeposition and post-treatment method for nickel-tungsten alloy used as drill bits)				
IT	7782-40-3, Diamond, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(pretreatment and electrodeposition and post-treatment method for nickel-tungsten alloy used as drill bits)				
L17	ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS				
AN	2001:64307 CAPLUS				
DN	134:124734				
TI	Compositions and processes for spin etch planarization in semiconductor device fabrication				
IN	Levert, Joseph; Towery, Daniel L.				
PA	Alliedsignal Inc., USA				
SO	PCT Int. Appl., 38 pp.				
	CODEN: PIXXD2				

DT Patent
 LA English
 IC ICM H01L021-321
 ICS C23F003-06
 CC 76-3 (Electric Phenomena)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001006555	A1	20010125	WO 2000-US18723	20000710
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2001054706	A1	20011227	US 1999-356487	19990719
	EP 1198827	A1	20020424	EP 2000-947151	20000710
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRAI	US 1999-356487	A	19990719		
	WO 2000-US18723	W	20000710		
AB	The present invention describes methods and chem. compns. for the spin etch planarization of surfaces, particularly Cu and Ta. An etching soln. is brought into contact with the upper face of a spinning wafer through a nozzle, preferably an oscillating nozzle. The etching soln. has a compn. that oxidizes the spinning surface, forming a passivation layer thereon. The etching soln. further contains reactants for removing the passivation layer exposing the underlying surface to further reaction, leading to the desired etching of the surface. The characteristics of the etching soln. are adjusted such that reactant diffusion to lower regions of the surface limits the rate of etching. Faster reaction occurs at higher regions of the surface lying in more rapidly moving etching soln. resulting in the desired planarization.				
ST	spin etching polishing semiconductor device fabrication; chem mech polishing device fabrication; oxidn etching device fabrication				
IT	Alcohols, processes RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (aliph.; in compns. and processes for spin etch planarization in semiconductor device fabrication)				
IT	Surfactants (anionic; in compns. and processes for spin etch planarization in semiconductor device fabrication)				
IT	Surfactants (cationic; in compns. and processes for spin etch planarization in semiconductor device fabrication)				
IT	Polishing (chem.-mech.; compns. and processes for spin etch planarization in semiconductor device fabrication)				
IT	Etching Integrated circuits Semiconductor device fabrication (compns. and processes for spin etch planarization in semiconductor device fabrication)				
IT	Hydrocarbons, processes RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (fluoro; in compns. and processes for spin etch planarization				

in **semiconductor** device fabrication)

IT Nozzles
(for spin etch **planarization** in **semiconductor** device fabrication)

IT Oxidizing agents
Wetting agents
(in compns. and processes for spin etch **planarization** in **semiconductor** device fabrication)

IT Amines, processes
Carboxylic acids, processes
Gelatins, processes
Phenols, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(in compns. and processes for spin etch **planarization** in **semiconductor** device fabrication)

IT Passivation
(in spin etch **planarization** in **semiconductor** device fabrication)

IT Surfactants
(nonionic; in compns. and processes for spin etch **planarization** in **semiconductor** device fabrication)

IT Surfactants
(org.; in compns. and processes for spin etch **planarization** in **semiconductor** device fabrication)

IT Etching
(photochem.; for **planarization** in **semiconductor** device fabrication)

IT Oxidation
(surface; in spin etch **planarization** in **semiconductor** device fabrication)

IT 7440-25-7, Tantalum, processes 7440-50-8, Copper, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(compns. and processes for spin etch **planarization** of)

IT 57-55-6, Propyleneglycol, processes 60-00-4, EDTA, processes 62-76-0, Sodium oxalate 64-17-5, Ethanol, processes 64-19-7, Acetic acid, processes 67-56-1, Methanol, processes **68-04-2**, Trisodium citrate 71-23-8, n-Propanol, processes 75-89-8 **77-92-9**, Citric acid, processes 87-69-4, Tartaric acid, processes 88-27-7, 2,6-Di-tert-butyl-4-[(dimethylamino)methyl]phenol 89-65-6, Erythorbic acid 95-14-7, 1H-Benzotriazole 102-71-6, Triethanolamine, processes 104-75-6, 2-Ethylhexylamine 107-21-1, 1,2-Ethanediol, processes 128-37-0, Agidol, processes 139-33-3 144-62-7, Oxalic acid, processes 288-36-8, 1,2,3-Triazole 288-88-0, 1H-1,2,4-Triazole 288-94-8, 1H-Tetrazole 1303-96-4, Borax 1310-73-2, Sodium hydroxide, processes 1333-39-7, Phenolsulfonic acid 1336-21-6, Ammonium hydroxide 6915-15-7, Malic acid 7439-98-7D, Molybdenum, salts, processes 7440-25-7D, Tantalum, salts, processes 7440-50-8D, Copper, salts, processes 7447-40-7, Potassium chloride, processes 7631-95-0, Sodium molybdate 7631-99-4, Sodium nitrate, processes 7647-01-0, Hydrogen chloride, processes 7664-38-2, Phosphoric acid, processes 7664-39-3, Hydrogen fluoride, processes 7664-93-9, Sulfuric acid, processes 7697-37-2, Nitric acid, processes 7722-84-1, Hydrogen peroxide, processes 7733-02-0, Zinc sulfate 7758-89-6, Cuprous chloride 7758-98-7, Cupric sulfate, processes 7775-09-9, Sodium chlorate (NaClO3) 8061-51-6, Sodium lignosulfonate 9002-89-5, Polyvinyl alcohol 9002-92-0, Poly(oxyethylene)lauryl ether 9004-32-4, Carboxymethylcellulose 12125-01-8, Ammonium fluoride 14066-19-4, Monohydrogen phosphate, processes 14265-44-2, Phosphate, processes 16887-00-6, Chloride, processes 17084-08-1, Hexafluorosilicate 26053-72-5, Diphenylsulfamic acid 27846-09-9, Iron monochloride

89800-24-8, Laprol 602

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(in compns. and processes for spin etch **planarization** in **semiconductor** device fabrication)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Anon; PATENT ABSTRACTS OF JAPAN 1997, V1997(01)
- (2) Contolini; US 5486234 A 1996 CAPLUS
- (3) Gelchinski; US 4497692 A 1985 CAPLUS
- (4) Ibm; EP 0699782 A 1996 CAPLUS
- (5) Kern; RCA REVIEW 1978, V39(2), P278 CAPLUS
- (6) Samsung Electronics; DE 19928570 A 1999 CAPLUS
- (7) Sasaki; US 5770095 A 1998 CAPLUS
- (8) Sez Semiconductor-Equipment; EP 0905754 A 1999 CAPLUS
- (9) Ube Ind Ltd; JP 08236615 A 1996 CAPLUS
- (10) Unvala; JOURNAL OF THE ELECTROCHEMICAL SOCIETY 1972, V119(3), P318 CAPLUS

L17 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS

AN 1999:420654 CAPLUS

DN 131:105857

TI Manufacture of carpet with cement-based backing

IN Endo, Katsuaki; Fukushima, Kenichi

PA Mitsubishi Kagaku BASF K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A47G027-02

ICS B32B013-14

CC 58-6 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 40

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11178701	A2	19990706	JP 1997-367264	19971224
AB	The method comprises molding a slurry of a cement compn. comprising a hydraulic inorg. powder contg. 4-25 wt.% and an aq. polymer dispersion to sheets, laminating a carpet substrate material to, and transferring the laminates sheets the sheets on heaters to heat and harden to obtain carpet. Optionally, a setting retardant selected from gluconic acid, gluconates, citric acid, and/or citrates is added to the slurry .				
ST	carpet cement based backing				
IT	Cement (construction material) (aluminous; manuf. of carpets with cement-based backings from mixts. contg.)				
IT	Polyester fibers, uses RL: TEM (Technical or engineered material use); USES (Uses) (fabrics, carpet base material; manuf. of carpets with cement-based backings)				
IT	Carpets (manuf. of carpets with cement-based backings)				
IT	Cement (construction material) (portland; manuf. of carpets with cement-based backings from mixts. contg.)				
IT	24937-78-8, Sumikaflex S 401 RL: TEM (Technical or engineered material use); USES (Uses) (Sumikaflex S 401; manuf. of carpets with cement-based backings from mixts. contg.)				
IT	77-92-9 , uses 471-34-1, Calcium carbonate, uses 526-95-4, Gluconic acid 527-07-1, Sodium gluconate 994-36-5 , Sodium				

citrate 36290-04-7, Mighty 150 83382-48-3, Nopco 8034 90803-17-1,
Acronal S400

RL: TEM (Technical or engineered material use); USES (Uses)
(manuf. of carpets with cement-based backings from mixts. contg.)

L17 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2002 ACS

AN 1991:667763 CAPLUS

DN 115:267763

TI Selective electroless metal deposition for via hole filling and conductor
pattern formation in VLSI multilevel interconnection structures

AU Dubin, V. M.

CS Minsk Radioeng. Inst., Minsk, USSR

SO Proc. - Electrochem. Soc. (1991), 91-11(ULSI Sci. Technol./1991), 739-48

CODEN: PESODO; ISSN: 0161-6374

DT Journal

LA English

CC 76-2 (Electric Phenomena)

AB The selective electroless Ni-Cu deposition process was investigated for
via hole filling and conductor pattern formation in VLSI multilevel
interconnection structures. Cu was added to Al-Si in order to deposit
Ni-Cu on Al-Si-Cu lines without any activation step and obtain a good
selectivity. A 0.2 mm Ni-Cu overcoat on a 0.5 .mu.m Al-Si-Cu lines
increases corrosion resistance, suppress hillock formation and decreases
resistance of interconnections. The Ni-Cu was deposited into via holes of
Ni-Cu overcoats of Al-Si-Cu lines without any activation. Via holes in a
1.5 .mu.m polyimide layer were filling by Ni-Cu to the top surface to give
completely **planarization** of interconnections. Good contact
resistance was obtained without any annealing by measuring the via chain
resistance. For comparison selective electroless Ni deposition on Al-Si
with Pd activation was investigated.

ST copper nickel via hole filling; conductor copper nickel patterning

IT Electric conductors

(electroless deposition of, for integrated circuits)

IT Electric resistance

(of copper-nickel electrolessly deposited layers)

IT Electric resistance

(contact, of copper-nickel electrolessly deposited layers)

IT 11101-28-3

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(electroless deposition of, for conductor patterning and via hole
filling)

IT 56-40-6, Glycine, uses and miscellaneous 56-89-3, Cystine, uses and
miscellaneous 77-92-9, Citric acid, uses and miscellaneous

631-61-8, Ammonium acetate 994-36-5, Sodium citrate 1336-21-6,

Ammonium hydroxide ((NH4)(OH)) 7681-53-0, Sodium hypophosphite

7718-54-9, Nickel dichloride, uses and miscellaneous 7758-98-7, Sulfuric

acid copper(2+) salt (1:1), uses and miscellaneous 7786-81-4, Nickel

sulfate 12125-02-9, Ammonium chloride, uses and miscellaneous

RL: USES (Uses)

(in electroless deposition of nickel for filling of via holes)

IT 64-19-7, Acetic acid, uses and miscellaneous 7647-01-0, Hydrogen

chloride, uses and miscellaneous 7647-10-1, Palladium dichloride

7664-39-3, Hydrofluoric acid, uses and miscellaneous

RL: USES (Uses)

(in electroless filling of holes and interconnects on silica layers)

IT 121088-52-6, AD9103

RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)

(in patterning of silica layers for **semiconductor** devices)

IT 7631-86-9, Silica, uses and miscellaneous

RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)

(patterning and hole filling of, for **semiconductor** devices)
 IT 7440-21-3, Silicon, uses and miscellaneous
 RL: USES (Uses)
 (via hole filling and conductor pattern formation on thermally oxidized)
 IT 7440-02-0, Nickel, uses and miscellaneous 11145-30-5 72893-14-2
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (via hole filling and conductor pattern formation with, for **semiconductor** devices)

L17 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2002 ACS

AN 1987:432086 CAPLUS

DN 107:32086

TI Electroless deposition of magnetic recording media and products produced thereby

IN Malik, Michael; Greene, Joseph L.

PA Richardson Chemical Co., USA

SO U.S., 9 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM H01F010-02

NCL 427129000

CC 77-8 (Magnetic Phenomena)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4659605	A	19870421	US 1984-610684	19840516
	EP 237663	A1	19870923	EP 1986-301984	19860318
	EP 237663	B1	19910925		
	R: BE, DE, FR, GB, LU, NL				
	CA 1291676	A1	19911105	CA 1986-504457	19860319
	JP 62246145	A2	19871027	JP 1986-89863	19860418
PRAI	US 1984-610684		19840516		

AB In a process for producing a high-d. magnetic storage device (e.g., a rigid memory disk) having improved magnetic recording properties, including high coercivity, high remanence, and improved hysteresis loop squareness, the device is prepd. by initially cleaning the surface of a **substrate**, such as an Al disk, zincating that cleaned surface when applicable, and electrolessly depositing a nonmagnetic, Ni-P layer which is substantially free of pits and other surface imperfections. The nonmagnetic Ni-P layer is then **polished** and a magnetic Co-P layer is electrolessly deposited. The Co-P deposition is performed in a highly stable, NH3-free bath contg. a source of Co ions, a source of hypophosphite ions, a source of citrate ions, and a low-mol.-wt., bath-sol. amino acid. Preferably, a buffering agent such as a borate is employed.

ST cobalt phosphorus electroless deposition magnetic recording; nickel phosphorus electroless deposition recording; storage magnetic device electroless deposition; recording magnetic disk electroless deposition

IT Amino acids, uses and miscellaneous

Borates

Carboxylic acids, uses and miscellaneous

RL: USES (Uses)

(in electroless deposition of nonmagnetic nickel-phosphorus and magnetic cobalt-phosphorus layers for magnetic storage devices)

IT Alkali metals, compounds

RL: USES (Uses)

(tetraborates and metaborates and pentaborates, in electroless deposition of nonmagnetic nickel-phosphorus and magnetic cobalt-phosphorus layers for magnetic storage devices)

IT Memory devices
(magnetic, electroless deposition of nonmagnetic nickel-phosphorus and
magnetic cobalt-phosphorus layers for)

IT Recording apparatus
(magnetic, manuf. of)

IT Memory devices
(magnetic, disks, electroless deposition of nonmagnetic
nickel-phosphorus and magnetic cobalt-phosphorus layers for)

IT 7440-66-6, Zinc, uses and miscellaneous
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(deposition of, in magnetic storage device manuf.)

IT 11109-71-0
RL: PRP (Properties)
(electroless deposition of magnetic layers of, for magnetic storage
devices)

IT 11149-64-7 12641-64-4
RL: PRP (Properties)
(electroless deposition of nonmagnetic layers of, for magnetic storage
devices)

IT 7429-90-5, Aluminum, uses and miscellaneous 25038-59-9, uses and
miscellaneous
RL: USES (Uses)
(electroless deposition of nonmagnetic nickel-phosphorus and magnetic
cobalt-phosphorus layers on, for magnetic storage devices)

IT 12720-80-8
RL: PRP (Properties)
(electroless deposition of nonmagnetic nickel-phosphorus and magnetic
cobalt-phosphorus layers on, for magnetic storage devices)

IT 56-40-6, Glycine, uses and miscellaneous 56-41-7, .alpha.-Alanine, uses
and miscellaneous 56-45-1, Serine, uses and miscellaneous
68-04-2, Sodium citrate 72-18-4, Valine, uses and miscellaneous
72-19-5, Threonine, uses and miscellaneous 77-92-9D, Citric
acid, salts 142-47-2, Monosodium glutamate 1303-96-4, Sodium
tetraborate 10043-35-3, Boric acid, uses and miscellaneous
RL: USES (Uses)
(in electroless deposition of nonmagnetic nickel-phosphorus and
magnetic cobalt-phosphorus layers for magnetic storage devices)

IT 7439-98-7D, Molybdenum, gluco-heptonic acid ester 7440-33-7D, Tungsten,
gluco-heptonic acid ester 7440-42-8D, Boron, gluco-heptonic acid ester
23351-51-1D, Glucoheptonic acid, esters
RL: PRP (Properties)
(in electroless deposition of nonmagnetic nickel-phosphorus and
magnetic cobalt-phosphorus layers for magnetic storage devices)

=> d his

(FILE 'HOME' ENTERED AT 09:10:18 ON 23 AUG 2002)

FILE 'REGISTRY' ENTERED AT 09:10:40 ON 23 AUG 2002
E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L1 1 S E3
L2 0 DH IS

FILE 'CA' ENTERED AT 09:16:30 ON 23 AUG 2002
L3 11385 S L1

FILE 'REGISTRY' ENTERED AT 09:19:05 ON 23 AUG 2002
E CETYLTRIMETHYLAMMONIUM BROMIDE/CN

L4 1 S E3
E CETYLTRIMETHYLAMMONIUM CHLORIDE/CN
L5 1 S E3

	E AMMONIUM BICITRATE/CN
	E AMMONIUM DICITRATE/CN
	E AMMONIUM CITRATE/CN
L6	3 S E3
	E POTASSIUM CITRATE/CN
L7	3 S E3
	E SODIUM CITRATE/CN
L8	2 S E3
	E CITRIC ACID/CN
L9	1 S E3

FILE 'CAPLUS' ENTERED AT 09:47:11 ON 23 AUG 2002

L10	17278 S (SLURRY OR CMP OR (CHEMICAL MECHANICAL POLISH?) OR PLANARIZ?
L11	2250 10 AND L4
L12	6 S L10 AND L4
L13	3 S L10 AND L5
L14	0 S (L6 AND L7) AND L10
L15	0 S (L6 AND L8) AND L10
L16	2 S (L7 AND L9) AND L10
L17	5 S (L8 AND L9) AND L10

=> s (buffer or (l16 and l7))and l10

188152 BUFFER

64 LL6

1334 L7

L18 246 (BUFFER OR (LL6 AND L7))AND L10

=> s (buffer or (l6 and l7)) and l10

188152 BUFFER

1283 L6

1334 L7

L19 246 (BUFFER OR (L6 AND L7)) AND L10